

or a little less alkaline, it does not follow that they may be inconsiderately administered. They stand at the head of the agents which exert on the serum the most marked fluidifying action. All the alkalies affect our economy in an identical manner. They produce on the organ of taste an impression *sui generis*, designated as *alkaline* or *urinary*. M. Chevreul showed this to be always due to the same substance, ammonia, which is set free by the decomposing effect exerted by the alkaline base on the hydrochlorate of ammonia contained in the buccal fluids. Experience has shown that, the same chemical fact prevails in respect to the bicarbonates and carbonates, and all the other fluids of the living body. Hence, wherever we introduce any alkaline substance into the economy, a certain quantity of ammonia is set free. This explains why the ingestion of a certain quantity of bi-carb. soda dissipates the symptoms of drudginess—the ammonia disengaged restores to the albuminous elements of the blood that fluidity which the coagulating action of alcohol had partially deprived them of.

Under what circumstances is the employment of alkalies efficacious or dangerous? Clinical observation shows us that the daily taking of a drachm or a drachm and a half of bicarbonate of soda, or its equivalent of any other alkali, so far from being generally injurious, is frequently advantageous. Many persons can take far larger doses with impunity, while much smaller ones have, in some cases, produced serious accidents. All substances which produce an acid predominance in the blood allow of a large quantity of alkalies being taken. Thus, the inactive inhabitants of towns, in whom there is hardly any acid secretion from the skin, especially in winter, will bear large doses of alkalies. It is the same with those who live upon an almost exclusively meat diet, inasmuch as the albuminized elements containing sulphur and phosphorus, these two elements produce, by their interstitial combustion, phosphoric and sulphuric acids in marked proportions. This explains why the urine of the carnivora is normally acid, that of the herbivora always alkaline. On the other hand, whatever favours the predominance of alkalies in the vital humours forbids their employment. Thus the laborious inhabitants of the country, in consequence of their abundant acid sweats, can ill bear the ingestion of alkalies. So with persons who adopt an exclusively vegetable regimen, the blood is normally rich in carbonate of potass, by means of the transformation which the salts of potass in combination with the organic acids have undergone. Lastly, there are certain pathological conditions which lead us to vary the amount of alkalies given. Who does not know that in gout, gravel, and especially diabetes, immense quantities of these may be given? and who is not aware that certain summer and autumn putrid affections will not tolerate them?

Clinical observation has long shown that the various alkalies may replace each other in practice. This is the case with carbonate of lime and of magnesia: as also with the compounds of soda and potass. It has been erroneously stated that soda is more favourable to the animal constitution than potass. Analysis of the animal liquids shows that the potass compounds are equally prevalent with the soda, and as regards the herbivora, far more so. But, although we can in general, by the aid of any alkaline preparation, induce an identical medical result, we believe it is better to give the preference (as mere antacids) to those alkaline compounds which present the advantage of having always an uniform chemical composition, and of producing little or no therapeutical effect; and in these respects the hydrated calcined magnesia and the bicarbonate of soda seem to hold the first rank.—*Med. Chirurg. Rev.*, Oct. 1847, from *L'Union Médicale*, Nos. 1 and 4.

**16. On Alum Gargles.** By M. MIALHE.—We have shown elsewhere that the true astringents belong to the class of *coagulants*, that is to say, the class of chemical agents capable of entering into chemical combinations with the albuminous elements of the blood, and forming with them an insoluble compound. In applying this principle to *alum*, we showed how this substance, penetrating into our tissues, is first decomposed by the alkalies of the blood, so as to form an insoluble sub-salt, which is deposited in the organic tissues, filling their network, and, so to speak, tanning them. We pointed out how a new portion of alum, being no longer modified by the alkalies already saturated, then acts by fluidifying the albumen, in stimulating exhalation; and how, lastly, this *alum-albuminous fluid*, taken into the circulation, again becomes solid when it finds itself in presence of

all the alkalies contained in the mass of the blood—and in this way we explained the agony of large doses of alum in arresting hemorrhage. Thus, in a small quantity, it is a very precious local astringent; in a larger quantity it becomes an energetic local fluidifier; and, after absorption, a general hemostatic of undoubted efficacy.

We omitted to state why we thought this substance should not be combined with *mel rose*, which it so commonly is. It always contains a marked quantity of the proto-sulphate of iron by reaction, on which the tannin of the *mel rose* produces a greenish precipitate. This, besides being disagreeable in appearance, leads the patient to the belief that the properties of the medicine have become deteriorated. Preferable combinations are the following:—

1st. *Astringent Gargism.*

Alum	:	:	:	:	$\frac{1}{2}$ a part.
Distilled water	:	:	:	:	150 parts.
Syrup of mulberries	} of each				25 parts.

—Poppies

For aphthous affections, mercurial stomatitis, and generally in all the diseases of the throat in which astringents are indicated.

2d. *Detergents Gargism.*

Alum	:	:	:	20 parts.
Distilled water	:	:	:	100 parts.
Syrup of mulberries	} of each			30 parts.

—Poppies

In hoarseness, in aphonia, and in those affections of the pharynx characterized by great dryness, and in which it is desired to excite the excretion of the menses. It is in this same dose—that is, its fluidifying dose—that alum should be given for the prevention and cure of pharyngeal diphtheritis.

Most practitioners, I may remark, administer alum in too small a proportion for the removal of acute hoarseness, and especially in the aphonia of singers. Theory and practice alike show us that these cases require strong gargles.—*Ibid.*, No. 34.

17. *Astringent Collyria.* By M. MALINE.—Many practitioners are in the habit of prescribing *mucilages* of gum, psyllium, and especially of quince, with the different medicinal agents which constitute the base of their astringent collyria. It is a bad practice, since all true astringents necessarily belong to the class of bodies which coagulate the serum of the blood, and all substances which coagulate albumen also coagulate gum and the liquids which contain it; whence it results that the addition of mucilage to a salt of alum, zinc, copper, lead silver, &c., necessarily gives rise to more or less of an entirely insoluble precipitate, which can in nowise advantageously act upon the mucous membrane of the eye. Such a combination is worthy of the period which gave rise to it. It belongs to that epoch in therapeutics in which practitioners were persuaded that all agents capable of modifying the living economy were endowed with absolute curative properties, having nothing in common with the action they exercised on our organs, an action which they considered as generally hurtful, and never useful. A fundamental error which time and experience have happily done justice to!—*Ibid.*, No. 40.

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## MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICE OF MEDICINE.

18. *On the Phosphate of Ammonia, and its value in the Treatment of Gout and Rheumatism.*—This is the title of a paper, read by Dr. SAMUEL EDWARDS, to the Bath and Bristol Branch of the Provincial Medical Association, and published in the *Provincial Medical and Surgical Journal*, Nov. 17th, 1847. The author states that some years since he “was informed by an American friend,” that he had seen phos-